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EXAMINER

KASRAIAN, ALLAHYAR

ART UNIT	PAPER NUMBER
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2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/642,687	Applicant(s) STAHL ET AL.	
	Examiner Allahyar Kasraian	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>08/19/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks

1. The examiner regrets about the informal first action mailed to the applicant(s) on 10/05/2007 which had errors and inappropriate notes. This is a replacement and corrected action with new set date.
2. The Art Unit location of this application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Priority

3. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Information Disclosure Statement

4. The information disclosure statement submitted on Aug. 19, 2003 has been considered by the Examiner and made of record in the application file.

Preliminary Amendment

5. The present Office Action is based upon the original patent application filed on Aug. 19, 2003 as modified by the preliminary amendment filed on Aug. 19, 2007.

Claims 1-11 are now pending in the present application.

Drawings

6. **Figure 1** should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

8. **Claim 7** is objected to because of the following informalities:

- a. On **line 2 of claim 7**, replace "pyload" with --payload-- after "a";

Appropriate correction is required.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. **Claims 2 and 4** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2 and 4 are vague and indefinite since they recite "online configuration table" which is not defined and described properly to disclose what it means.

Claim Rejections - 35 USC § 101

11. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

12. **Claims 1-7 and 9-11** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Consider **claims 1-5**, the claimed subject matter is a non-statutory since they claim a computer program.

Claims 9-11 are rejected due to their dependency to rejected **claim 1, 3 and 5**.

Computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions.

For purpose of applying prior art, examiner interprets computer program as a "computer readable medium encoded with a computer program" for **claims 1-5**.

Consider **claims 6 and 7**, the claimed subject matter is a non-statutory since they claim Interworking protocol, which is a nonfunctional descriptive material.

Nonfunctional descriptive material that does not constitute a statutory process, machine, manufacture, or composition of matter and should be rejected under 35 U.S.C. 101. Certain types of descriptive material, such as music, literature, art, photographs, and mere arrangements or compilations of facts or data, without any functional interrelationship is not a process, machine, manufacture, or composition of matter. USPTO personnel should be prudent in applying the foregoing guidance. Nonfunctional descriptive material may be claimed in combination with other functional descriptive multi-media material on a computer-readable medium to provide the necessary functional and structural interrelationship to satisfy the requirements of 35 U.S.C. 101. The presence of the claimed nonfunctional descriptive material is not necessarily determinative of nonstatutory subject matter. For example, a computer that recognizes a particular grouping or sequence of musical notes read from memory and thereafter causes another defined series of notes to be played, requires a functional interrelationship among that data and the computing processes performed when utilizing that data. As such, a claim to that computer is statutory subject matter because it implements a statutory process.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a

later invention was made in order for the Examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. **Claims 1, 2 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over **YI (US Patent # 7197129 B2)** in view of **Bedingfield et al. (US Patent # 6714639 B1)** (hereafter Bedingfield) further in view of **Lehtinen (US Patent # 6744870 B1)**.

Consider **claim 1**, YI disclose a method that could be stored in computer-readable medium encoded with a computer program for escaping a signaling transfer point (STP) signaling connection control part (SCCP) and for identifying a single application service request, comprising the steps of:

mapping an incoming global title (GT) of an incoming SS7 message to an internal subsystem number (SSN) of a local user (FIG. 3 and lines 21-29 of col. 2, "In order to perform the routing by global title... The GTT is used to map a global

title including signaling message into a SSN and a signaling point code recognizable by MTP 9. GTT is performed in the SCCP”).

However YI fails to disclose mapping the internal SSN to a set of application service requests.

In the same field of endeavor, Bedingfield disclose mapping the internal SSN to a set of application service requests. (FIG. 1 and lines 60-67 of col. 1 and 1-7 of col. 2, “exemplary service routing are illustrated as service routing 1-4 in FIG. 1. Using the DPC and SSN, a service can be issued over the telephone network to provide the service.”)

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate mapping SSN to set of application service routing as taught by Bedingfield to GTT of SCCP signaling message disclosed by YI for purpose of assigning services to the SCCP signaling message. The proper motivation is to use a prepared task list assignment when receiving a signaling message.

However, YI as modified by Bedingfield fail to disclose identifying a single application service request using transaction capabilities application part (TCAP) filter mechanism.

In the same field of endeavor, Lehtinen disclose identifying a single application service request using transaction capabilities application part (TCAP) filter mechanism (lines 17-36 of col. 6, “When an initiation request for a service dialog--which arrives as a TC_BEGIN primitive (containing an Initial_DP message)--

is received on a network element, a new instance of the receiving program SRP is created that will search the correct distributor program block, create an instance thereof for the use of said service request, and transmit a TCAP message to said instance”).

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate the application service requests and identifying them by TCAP as taught by Lehtinen to subsystem number as disclosed by YI as modified by Bedingfield for purpose of applying different services into signaling network. The proper motivation is to use a request service in a signaling network system.

Consider **claim 2 as applied to claim 1 above**, YI disclose mapping is performed using online configurable tables (lines 12-17 of col. 5, “The pre-fetch GTT module 110 and the post-fetch GTT module 130 respectively have a pre-fetch GTT database and a post-fetch GTT database to provide independence from each other. The pre-fetch GTT database and the post-fetch GTT database each have the same structure, as shown in Table 1” the pre-fetch and post-fetch GTT database is considered as configurable table).

Consider **claim 9 as applied to claim 1 above**, Lehtinen disclose Signaling transfer point (STP) for routing SS7 links comprising at least one processor and at least one processing software to process incoming SS7 messages, to identify a

single application service request in the incoming SS7 message, and to provide the identified single application service request to a signaling application server (SAS) for further processing (FIG. 3 for service control function SCF –considered as SAS– where it gets SS7 messages from service switching point SSP, lines 42-46 and 51-55 of col. 5, to identify a single application service, lines 17-36 of col. 6; the processor is inherently taught by the reference since every network point has at least one processor to process the software related to network protocol).

YI also discloses wherein the at least one processing software includes a SCCP Local User Escape process to identify a single application service request out of a signaling connection control part (SCCP). (FIG. 3 for a SCCP signaling message lines 60-65 of col. 1).

15. **Claims 3, 4 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bedingfield et al. (US Patent # 6714639 B1)** (hereafter Bedingfield) in view of **Lehtinen (US Patent # 6744870 B1)**.

Consider **claim 3**, Bedingfield disclose a method that could be stored in computer-readable medium encoded with a computer program for escaping a signaling transfer point (STP) signaling connection control part (SCCP) and for identifying a single application service, comprising the steps of:

routing an incoming SS7 message to an internal subsystem number (SSN) of a local user based on an incoming subsystem number (SSN), mapping the internal

SSN to a set of application service requests (FIG. 1 and lines 60-67 of col. 1 and 1-7 of col. 2, "each service routing record contains a destination point code (DPC) and subsystem number (SSN)... The subsystem number identifies the particular application executed by the server to implement the service being provided. Exemplary service routing are illustrated as service routing 1-4 in FIG. 1. Using the DPC and SSN, a service can be issued over the telephone network to provide the service.").

However, Bedingfield fail to disclose identifying a single application service request using transaction capabilities application part (TCAP) filter mechanism.

In the same field of endeavor, Lehtinen disclose identifying a single application service request using transaction capabilities application part (TCAP) filter mechanism (lines 17-36 of col. 6, "When an initiation request for a service dialog--which arrives as a TC_BEGIN primitive (containing an Initial_DP message)--is received on a network element, a new instance of the receiving program SRP is created that will search the correct distributor program block, create an instance thereof for the use of said service request, and transmit a TCAP message to said instance").

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate the application service requests and identifying them by TCAP as taught by Lehtinen to subsystem number as disclosed by Bedingfield for purpose of applying different services into signaling

network. The proper motivation is to use a request service in a signaling network system.

Consider **claim 4 as applied to claim 3 above**, Bedingfield disclose mapping is performed using online configurable tables (FIG. 1, table 101 is considered as configurable table).

Consider **claim 10 as applied to claim 3 above**, Lehtinen disclose Signaling transfer point (STP) for routing SS7 links comprising at least one processor and at least one processing software to process incoming SS7 messages, to identify a single application service request in the incoming SS7 message, and to provide the identified single application service request to a signaling application server (SAS) for further processing (FIG. 3 for service control function SCF –considered as SAS– where it gets SS7 messages from service switching point SSP, lines 42-46 and 51-55 of col. 5, to identify a single application service, lines 17-36 of col. 6; the processor is inherently taught by the reference since every network point has at least one processor to process the software related to network protocol)

YI also discloses wherein the at least one processing software includes a SCCP Local User Escape process to identify a single application service request out of a signaling connection control part (SCCP). (FIG. 1 for a SCCP signaling message lines 65-67 of col. 1 and lines 1-5 of col. 2).

16. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over **YI (US Patent # 7197129 B2)** in view of **Bedingfield et al. (US Patent # 6714639 B1)** (hereafter Bedingfield).

Consider **claim 5**, YI disclose a method that could be stored in computer-readable medium encoded with a computer program for escaping a signaling transfer point (STP) signaling connection control part (SCCP) and for identifying a single application service request, comprising the steps of:

mapping an incoming global title (GT) of an incoming SS7 message to an internal subsystem number (SSN) of a local user or routing an incoming SS7 message to an internal subsystem number (SSN) of a local user based on an incoming subsystem number (SSN), (FIG. 3 and lines 21-29 of col. 2, "In order to perform the routing by global title... The GTT is used to map a global title including signaling message into a SSN and a signaling point code recognizable by MTP 9. GTT is performed in the SCCP").

In the same field of endeavor, Bedingfield disclose mapping the internal SSN to a set of application service requests. (FIG. 1 and lines 60-67 of col. 1 and 1-7 of col. 2, "exemplary service routing are illustrated as service routing 1-4 in FIG. 1. Using the DPC and SSN, a service can be issued over the telephone network to provide the service.")

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate mapping SSN to set of application

service routing as taught by Bedingfield to GTT of SCCP signaling message disclosed by YI for purpose of assigning services to the SCCP signaling message. The proper motivation is to use a prepared task list assignment when receiving a signaling message.

17. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over **YI (US Patent # 7197129 B2)** in view of **Bedingfield et al. (US Patent # 6714639 B1)** (hereafter Bedingfield) further in view of **Lehtinen (US Patent # 6744870 B1)**.

Consider **claim 11 as applied to claim 5 above**, YI as modified by Bedingfield disclose the at least one processing software includes a SCCP Local USR Escape process to identify a single application request out of a signaling connection part (SCCP). (FIG. 3 and lines 21-29 of col. 2 from YI and FIG. 1 and lines 60-67 of col. 1 and 1-7 of col. 2 from Bedingfield)

However, YI as modified by Bedingfield fail to disclose Signaling transfer point (STP) for routing SS7 links comprising at least one processor and at least one processing software to process incoming SS7 messages, to identify a single application service request in the incoming SS7 message, and to provide the identified single application service request to a signaling application server (SAS) for further processing.

In the same field of endeavor, Lehtinen disclose Signaling transfer point (STP) for routing SS7 links comprising at least one processor and at least one

processing software to process incoming SS7 messages, to identify a single application service request in the incoming SS7 message, and to provide the identified single application service request to a signaling application server (SAS) for further processing (FIG. 3 for service control function SCF –considered as SAS- where it gets SS7 messages from service switching point SSP, lines 42-46 and 51-55 of col. 5, to identify a single application service, lines 17-36 of col. 6; the processor is inherently taught by the reference since every network point has at least one processor to process the software related to network protocol)

Therefore, it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate the identifying application service requests from SS7 message as taught by Lehtinen to subsystem number as disclosed by YI as modified by Bedingfield for purpose of applying different services into signaling network. The proper motivation is to use a request service in a signaling network system.

18. **Claims 6 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Sprague et al. (US Patent # 7050456 B1)** (hereafter Sprague) in view of **Segal (US Patent Application Pub. # 2003/0041122 A1)**.

Consider **claim 6**, Sprague discloses Interworking protocol between a signaling transfer point (STP) for processing SS7 messages and a signaling application server (SAS) for processing application service requests, wherein the

interworking protocol is TCP/IP or UDP/IP including at least one field to be processed in the SAS (FIG. 24 for SS7 message signal unit encapsulated in the data field of TCP/IP packet, as described in lines 24-54 of col. 16; FIG. 23 shows the message flow through STP 1510 when processing user part message sent to and received from SSP 1730 over TCP/IP network 1740 as indicated in lines 22-25 of col. 15; SSP service switching point is considered as SAS by definition).

However, Sprague fails to explicitly specify that the filed reserved to include a single application service request.

In the same field of endeavor Segal disclose the filed reserved to include a single application service request (FIG. 3 for service/application message and lines 1-9 of par. 0016).

Therefore, it would have been obvious to a person or ordinary skills in the art to combine the filed of application service for SS7 frame as taught by Segal to the data field of TCP/IP packet as shown by Sprague for purpose of transmitting and receiving SS7 application messages over different protocol. The proper motivation is to execute application query messages via an internet protocol transport (Segal lines 3-4 of par. 0001).

Consider **claim 7 as applied to claim 6 above**, Sprague disclose the interworking protocol includes a header and a payload, wherein the payload includes at least one SCCP message, and wherein the header includes at least one of the following parameters: address information of the sending unit in the STP, SCCP

message type, internal application service id, GT translation indicator (FIG. 24 for SS7 MSU message type).

19. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Lehtinen (US Patent # 6744870 B1)** in view of **YI (US Patent # 7197129 B2)**.

Consider **claim 8**, Lehtinen disclose Signaling transfer point (STP) for routing SS7 links comprising at least one processor and at least one processing software to process incoming SS7 messages, to identify a single application service request in the incoming SS7 message, and to provide the identified single application service request to a signaling application server (SAS) for further processing (FIG. 3 for service control function SCF –considered as SAS- where it gets SS7 messages from service switching point SSP, lines 42-46 and 51-55 of col. 5, to identify a single application service, lines 17-36 of col. 6; the processor is inherently taught by the reference since every network point has at least one processor to process the software related to network protocol).

However, Lehtinen fails to explicitly disclose the at least one processing software includes a SCCP Local User Escape process to identify a single application service request out of a signaling connection control part (SCCP).

In the same field of endeavor, YI discloses the at least one processing software includes a SCCP Local User Escape process to identify a single application

service request out of a signaling connection control part (SCCP). (FIG. 3 for a SCCP signaling message lines 60-65 of col. 1).

Therefore it would have been obvious to a person of ordinary skills in the art at the time the invention was made to incorporate SCCP message as taught by YI to application service request identified as disclosed Lehtinen for purpose of processing signaling transmission. The proper motivation is to process messages contained in signaling connection control part.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

- a. Malik (U.S. Patent # 6415027 B1) disclose Networks, systems and methods for intelligently routing traffic within a telephone network.
- b. Krishnamurthy et al. (U.S. Patent # 6760343 B1) disclose Method and apparatus for providing a virtual SS7 link in a communications system.
- c. Zhang et al. (U.S. Patent # 7103644 B1) disclose system for an integrated data network voce-oriented service and non-voice-oriented service converged creation and execution environment.

21. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents

P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

22. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Allahyar Kasraian whose telephone number is (571) 270-1772. The Examiner can normally be reached on Monday-Thursday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Pérez-Gutiérrez can be reached on (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.


Application/Control Number:
10/642,687
Art Unit: 2617

Page 20

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Allahyar Kasraian
A.K./ak

November 27, 2007


Rafael Pérez-Gutiérrez
Supervisory Patent Examiner
Technology Center 2600
Art Unit 2617
11/28/07